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ECCENTRIC OFFICIAL STATISTICS.

THE JOURNAL OF SOCIOLOGY for November 1895 contained a paper by the commissioner of labor, entitled "Contributions of the United States Government to Social Science." The article has thus far escaped due criticism. Colonel Wright very truly remarks: "The general welfare and blessings of liberty can neither be secured nor promoted without an intelligent understanding of all the conditions surrounding life." An inquiry, therefore, as to the influence of these contributions to social science, for which in so extended an article Colonel Wright finds only words of praise, seems the more necessary because his failure to give any word of warning as to their use can have no other effect than to strengthen public confidence in statistics which in large part seem worthy of no confidence whatever, and which instead of promoting an intelligent understanding of social conditions have chiefly served to mislead.

It would seem that no more conclusive proof of the deceptive and pernicious character of our census and other statistics could be adduced than the fact that they have not only grossly deceived those unused to statistical investigation but statisticians of the highest repute. In a speech upon the Wilson bill, the Honorable Thomas B. Reed quoted an article in the *Fortnightly Review* as showing what a foreign writer thought of the result of our tariff policy. This writer, Mr. J. Stephens Jeans, failing to comprehend the statistical methods of our census officials, says:

> What, however, is probably most of all remarkable in the recent census returns of manufacturers, is the fact that between 1880 and 1890 the actual advance in wages paid in manufacturing industries had increased to a larger extent than the increase that took place in the previous thirty years. This appears to be so startling that it might be deemed to be altogether incredible were it not supported by the sober, unbiased testimony of a census report.

The noted and widely quoted English statistician, Mulhall, arrived at almost precisely the same erroneous conclusion in an article in the *North American Review.*[1] Though these conclusions of Mulhall as to the increase of wealth and the increase of wages in the United States have been widely quoted and almost universally accepted, and though works of reference compiled from our census report containing similarly erroneous deductions, and also newspaper articles of like tenor have been widely circulated, we have heard from the census office no word of warning.[2] [3]

The error of Mr. Mulhall, and the very many who have arrived at similar conclusions, has been their failure to ascertain and comprehend the radical difference in the methods of compilation of the statistics between our earlier and more recent census reports. As the true character of these statistics may only be ascertained through an extended investigation, this error seems more excusable in others than in officials of our census bureau.

A fair specimen of the contributions of the United States government to social science is furnished in a contribution by one of these officials in the January number (1896) of the Bulletin of the Department of Labor: "The Wealth and Receipts and Expenditures of the United States Government," by Wm. M. Steuart. From Colonel Wright's letter of transmittal of the volumes of manufacturing statistics of the eleventh census, we learn that the tabulation and preparation of the text of these volumes was conducted by this gentleman, as chief of division. In this article it is stated that, "The total value of the products of productive industry, which include manufactures and farm, fishery, and mineral products, for the same year (1890), amounted to $12,148,380,626." This sum being obtained by aggregating the values of all manufactured products, as reported at the eleventh census, together with the amount reported as the value of farm, fishery, and mineral products. This statement reminds one of the sailor's refrain in "The Yarn of the Nancy Bell." The sailor who had assisted in devouring every member of the shipwrecked crew until he was the only survivor, claimed to be not only himself but every other member of the crew. Just so with Mr. Steuart's totals, which include as still existing the value not only of finished products but of products consumed in their production. In this article we find the following tables, the figures of which may be contrasted with statistics presented in an article published in the November 1895 Labor Bulletin, by George K. Holmes, who, as special agent, had charge of the investigation of the eleventh census regarding "Farms, Homes and Mortgages." From Mr. Holmes' table we quote only his statistics of production, omitting those regarding debt and mortgages.

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[1] June 1895, "Wealth and Power of the United States."

[2] In the *Journal of Political Economy* (December 1895), the writer of the present article demonstrated the error of Mr. Mulhall's conclusions and the utter worthlessness of these census statistics for about the only purpose for which they are ever used, that of comparison.

[3] For the satisfaction of readers who are inclined to accept authorities rather than the investigations of those occupying no official position, the writer presents the following letter from one who, besides being an able student of economic questions, occupies the high office of secretary of treasury:

TREASURY DEPARTMENT, OFFICE OF THE SECRETARY,
WASHINGTON, D. C., April 23, 1896.

MR. H. L. BLISS, Chicago, Ill.,

My dear Sir:— I read your article on the "Use of Census Statistics" with a great deal of interest and fully agree with what you say upon the subject. In my opinion Mr. Mulhall is a very unreliable statistician and economist. I at one time commenced the preparation of a paper upon the same subject myself, but it was never completed and of course never published. Very truly yours,

J. G. CARLISLE.

MR. STEUART'S TABLES.

POPULATION, WEALTH, VALUE OF PRODUCTS OF INDUSTRY, AND DEBT.

Census year	Population	Wealth	Value of manufactures, and farm, fishery, and mineral products	Total national debt less cash in treasury at end of fiscal year
1800	5,308,483			
1810	7,239,881			
1820	9,633,822			
1830	12,869,020			
1840	17,069,453			
1850	23,191,876	$7,135,780,228	*a*$1,029,106,798	
1860	31,443,321	16,159,616,068	*a* 1,898,785,768	$59,964,402.01
1870	38,558,371	30,068,518,507	*b* 6,843,559,616	2,331,169,956.21
1880	50,155,783	43,642,000,000	*c* 7,974,097,438	1,919,326,747.75
1890	62,622,250	65,037,091,197	*d*12,148,380,626	890,784,370.53

PER CAPITA WEALTH, VALUE OF PRODUCTS OF INDUSTRY, AND DEBT.

Census year	Wealth	Value of manufactures, and farm, fishery, and mineral products	Total national debt, less cash in treasury
1800			
1810			
1820			
1830			
1840			
1850	$307.68	$44.37	
1860	513.93	60.39	$1.91
1870	779.82	177.49	60.46
1880	870.13	158.99	38.27
1890	*e* 1,036.01	193.99	14.22

PERCENTAGES OF INCREASE OF POPULATION, WEALTH, VALUE OF PRODUCTS OF INDUSTRY, AND DEBT.

Census year	Population	Wealth	Value of manufactures, and farm, fishery, and mineral products	Total national debt, less cash in treasury
1800				
1810	36.38			
1820	33.07			
1830	33.55			
1840	32.67			
1850	35.87			
1860	35.58	126.46	84.51	
1870	22.63	86.07	260.41	3,787.59
1880	30.08	45.14	16.52	*f* 17.67
1890	24.86	49.02	52.35	*f* 53.59

a Not including value of farm products.

b Value of farm products includes betterments and addition to stock.

c Certain duplications in statistics of manufacturers as published have been eliminated.

d Not including certain manufacturing industries not fully enumerated at prior censuses.

e Not including the values for Indian Territory.

f Decrease.

MR. HOLMES' STATISTICS OF PRODUCTION.

Products of manufacturers less cost of materials, -	$4,211,239,271
Product of farms, - - - - - -	2,460,107,454
Product of fisheries, - - - - -	44,277,514
Product of mines and quarries, - - - -	587,230,662
Total products of productive industry, -	$7,302,854,901

The value of the products of industry as stated by Mr. Steuart is thus 66 per cent. greater than the value as stated by Mr. Holmes. As both statements are "official" and have the indorsement of the highest statistical authority, Colonel Wright, we must accept both statements as undoubtedly correct, and as equally illustrating the value of the contributions of the United States government to social science.

Regarding the foregoing tables of his article, Mr. Steuart remarks:

> "The value of the products of industry shown for 1850 and 1860 do not include some elements that enter into the values for subsequent years. This fact, combined with the improvement in statistical methods and the greater care bestowed on the enumeration at subsequent censuses, will not permit of the use of percentages based on these figures or on the total wealth as indicating the exact increase." After explaining the greater accuracy of the figures regarding debt and expenses, Mr. Steuart farther remarks: "While, for the reasons given, the totals for wealth and values of products of industry can only be used in a general way for comparison, the totals for 1860 may be accepted as showing the conditions prevailing during the decade immediately preceding the Civil War and those for 1890 as indicating the conditions that prevailed during a decade after the direct effects of the war had disappeared. The two totals indicate normal conditions. Comparing the two years it appears that the total wealth per capita increased from $513.93 to $1,036.01 or 101.59 per cent., and the per capita value of the products of industry increased from $60.39 to $193.90 or 221.23 per cent."

Though in a footnote to his table Mr. Steuart admits that for 1860 the values of farm products are not included, he compares the statistics which he gives for 1860 and 1890 as indicating normal conditions in two periods, and as showing an increase in production per capita from $60.39 to $193.90.

Dividing the correct figures of the value of the products of 1890, as given by Mr. Holmes, by the population of that year, we find the per capita value of the products of productive industry for 1890 to have been $116.61 instead of $193.90.

If there be any considerable element of truth in the census showing of a large increase in the number of those engaged in manufacturing and mechanical industry, relative to population, and of an enormous increase in both the capital invested and the value of the product, the agricultural product of 1860, which is omitted, must have been the most important element in the products of industry of that year. The statistics given for 1860 are, however, incomparable with those of 1890, not only because of the omission of the agricultural product, but because the value of the manufacturing product as reported was grossly inadequate. A comparison of the tables of occupation with those of manufacturing industry of the census of 1860 reveals a discrepancy which shows this conclusively. This is most noticeable in the hand trades. Regarding this matter General Francis A. Walker, Superintendent of both the ninth and tenth censuses, remarks in the ninth census:

> The experience of the census in 1860 and 1870 with the production of four common and important mechanical trades will give an idea of the scope of omission resulting from this cause. A comparison of the tables of manufacture with those of occupation for 1860 exhibits the fact that of 51,695 painters the production of only 913 is accounted for among the products of industry; of 242,958 carpenters only 9006 appear in the tables of manufactures; of 112,357 blacksmiths only 15,720, and of 43,624 coopers only 13,750; that is of the first named industry only 1.8 per cent. of the artisans contributed to the reported production of their craft; of the second 3.7 per cent.; of the third 14 per cent.; of the fourth 32 per cent.; or to the aggregate of these figures, out of 450,634 artisans of the most efficient and best paid classes only 39,384 or 9 per cent. are accounted for in the statistics of manufactures. Had the 411,245 artisans not returned produced as much man for man as those who were embraced in the tables of production the gross products of industry would by the full representation of these four trades alone have been increased $475,755,951 or a little over 25 per cent. of what was actually reported, while the net product, deducting, that is, cost of materials consumed, would have been increased in a still higher ratio, namely, by $284,229,445 upon a total of 854,256,384 or as nearly as possible 33⅓ per cent.

Besides workers in other trades enumerated in the occupation tables and not in the tables of manufactures General Walker estimates that one-fourth of those enumerated in the former tables as laborers should also be included in the manufacturing returns. The fuller enumeration at the census of 1890 of the classes omitted at the earlier censuses from the manufacturing and mechanical returns results from a change in the law which provides for special agents for such enumeration, which at the earlier censuses was left with the marshals who collected the statistics of population. How much more thorough was this enumeration in the eleventh than even in the tenth census will be understood when it is stated that in five trades, painting and paperhanging, carpentry, masonry, plumbing, and plastering, the number returned was 265 per cent. greater in the later than in the former census.

In the ninth census, after allowing for the deficiency of both the eighth and the ninth censuses, General Walker estimated the actual increase in the value of manufactured products from 1860 to 1870 as 108 per cent. He also estimated that prices had risen 56 per cent. "That is that manufactured articles of the same quality (averaging all branches of production) which would have been $1,000,000,000 in 1860 would have been worth $1,560,000,000 in 1870." This would leave the increase of manufacturing production in the ten years to be represented by 33⅓ per cent.[1] As population increased nearly 23 per cent. the per capita increase would be less than 11 per cent., yet it may be noticed that Mr. Steuarts's table gives the per capita increase in production of this decade as 260 per cent. It is true Mr. Steuart remarks that percentages based on the figures given cannot be relied upon as indicating the "exact" increase. He however leaves it to be inferred that in a rough way they show the facts.

It seems incredible that so eminent a statistician as Colonel Wright should quote and compare these incomparable statistics to prove for instance that women are not taking the place of men in manufacturing industries. In an article contributed to the Chicago *Record* of July 20, 1894,[2] Colonel Wright says:

> The discussion of the question therefore is interesting sociologically, but it is often conducted more from the standpoint of sentiment than from fact. The results of the eleventh census give the fact and show clearly the tendencies of the times in respect to the employment of the classes named. In this

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[1] By what is evidently a clerical error stated in the text as 52 per cent.

[2] "Women and Children Work."

article I shall deal only with the women and children employed in the mechanical and manufacturing industries of the country, because this is sufficient for this time and purpose.

It does not seem that the tendencies of the times as to the employment of women and children can be shown by a comparison of statistics which take no account of the increasing number of both women and children employed in department stores, and of children who earn a precarious living as bootblacks and peddlers of newspapers. Blacking boots seems as much a mechanical industry as painting houses. The painters have, however, been included as engaged in manufacturing and mechanical industries, while the bootblacks have not, and these statistics are quoted as proving "conclusively" that the very general impression as to the increased employment of women and children is erroneous.

In this contribution to the Chicago *Record* Colonel Wright further says:

> The total number of persons, men, women and children, engaged in the industries named was in 1890, 4,711,832, as against 2,732,595 in 1880, 2,053,996 in 1870 and 1,311,246 in 1860. Reduced to percentages these persons constituted in 1860 4.17 per cent of the whole population of the country, in 1870 5.33 per cent., in 1880 5.45 per cent., and in 1890 7.52 per cent. As a side fact from the one under discussion, I may remark that these figures show conclusively that a constantly increasing proportion of the total population is engaged in the mechanical and manufacturing industries of the country.

It is perhaps true that a larger proportion of our people are employed in these industries than formerly but can this be conclusively proved by these statistics? Our census statistics seem also to show that a larger proportion of our people are employed in gainful pursuits than formerly. Is this also true, and if so, does it indicate harder conditions; that the head of the family is less able to alone support the family than formerly.

Colonel Wright again says:

> A more instructive comparison, however, is to be found in discussing the proportion of the total number of employés engaged in manufacturing industries. This comparison shows that in 1860 20.66 per cent. of all the persons

employed in manufacturing industries were females above fifteen years of age;[1] in 1870 they constituted 15.76 per cent. of the total number employed; in 1880 they were 19.45 per cent. and in 1890 they were 17.94 per cent. The relation, therefore, to the total number employed was quite stationary at the last three federal censuses and was only about 2 per cent. in 1879 over what it was 1870 and nearly 3 per cent. relatively less than in 1860. The women are therefore not crowding upon the men in mechanical industries.

In 1860 the manufacturing returns fully included the large factories in which the women formed a large proportion of the operatives, but failed to include carpenters, painters, and those employed in similar trades. In 1870 this was true to a less extent and a smaller proportion of women is shown. At the census of 1890, besides a very complete enumeration of trades in which men are almost exclusively employed, there are also included 461,009 employers, officers, and clerks, a class not previously fully included, less than 1 per cent. of whom are women. General Walker in the census of 1870 estimated that there were over 500,000 employés omitted that should have been included; the class omitted he also declares were almost exclusively men. If we add these 500,000 men to the number of employés of the census of 1870 we find the percentage of females at that census to be 12.67 instead of 16.76 of the total operatives.

The number of women employed in manufacturing industries as given in Colonel Wright's article is: 1860, 270,897; 1870, 323,770: 1880, 531,639; 1890, 845,428. This shows an increase since 1870 of 160 per cent., but as census statistics show since 1880 a decrease of 60,727 in the number of children employed, Colonel Wright concludes that women are taking the place of the children and "are not crowding upon the men." As there was an increase in this decade of 313,879 in the number of women the figures do not seem to justify Colonel Wright's conclusion unless it can be shown that it takes five women to do the work of one child. The decrease in the number of children seems gratifying, if true, or if it be not because women's work has become so cheap that it does not pay to employ children. Possibly the children have been driven into employments even less desirable than that of the factory. That this is the fact the writer does not assert only that the statistics presented by Colonel Wright do not, as he claims, "show clearly the tendencies of the times."

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[1] This is an error. The census of 1860 reports the average number of hands as 1,311,246; males, 1,040,349; females, 270,897. The number of females above fifteen years of age is not reported. The number of females reported therefore includes female children.

The census of 1870 correctly quotes the census of 1860, but the tenth and eleventh censuses both falsify it, and the eleventh census gives the erroneous percentages quoted by Col. Wright.

When statisticians so noted as Mr. Mulhall and Colonel Wright are so misled by our census it does not seem strange that those unused to statistical investigation are also deceived and that Colonel Wright finds it necessary to attempt explanation as follows:[1]

> During the past two or three years a statement purporting to give the relation of wages to cost of production, or the proportion of labor cost to the whole cost, has been going the rounds of the press. This statement has generally been in the following form:
>
> "Mr. Carroll D. Wright, the national labor statistician, has figured out that the average rate of wages per year paid in the United States is $347, and the average product of each laborer is valued at $1888. This gives the employer 82.2 per cent. while the man who does the work and produces the results is allowed a paltry 17.8 per cent. In spite of our boasted free country and high wages the fact remains that the proportion of the proceeds of his labor paid to the American workman is smaller by far than that paid to any other workingman in any civilized or uncivilized country on the globe."
>
> . . . . The prominence given to this statement warrants its notice in the Bulletin. . . . . The figures themselves are in the main correct; they relate more particularly to the census of 1880 than to any other collection of data. Analysis of the figures and the facts underlying them shows the fallacy of the conclusion drawn from them.
>
> If the aggregate wages paid in the manufacturing and mechanical industries of the United States, as shown by the census of 1880 be divided by the total number of employés to whom the wages were paid, the quotient will be 347, thus determining the average wages paid to the employés in the manufacturing and mechanical industries of the country as $347. Dividing the aggregate value of all the products of manufacturing and mechanical industries by the number of employés engaged therein the quotient is 1965. Now, $347 is

[1] Department of Labor Bulletin, March 1896.

17.7 per cent. of the gross value of the per capita product, as stated, leaving a balance of course of 82.3 per cent., or $1618, which the originator of the statement quoted above assumes goes to the employer. The 82.3 per cent. of the tótal product, or $1618 per capita, covers all expenses of production, cost of materials, miscellaneous items, profits, deterioration, interest — everything in fact, which can be counted as cost of production other than wages. Taking the eleventh census, that for 1890, it is found that the value of the gross product per capita for the number of employés engaged in manufacturing and mechanical industries was $2204 and the average annual wages per employé, computed for 1890 as already computed for 1880, was $445. The writer of the statement quoted above would assume, for the eleventh census, that while $445 was paid to labor $1759 went to the employer. As a matter of fact, of the total product per capita, 20.18 per cent. went to labor, 55.08 per cent. for materials, and 24.74 per cent. to miscellaneous expenses, salaries, interest, profits, etc.

All statements like that quoted above are fallacious in their application. While the figures in themselves are in the main fairly correct, and the percentages so, the balance, or 82.2 per cent., does not go to the employer, but, as shown, largely for raw materials; and of the amount paid for raw materials the bulk goes to labor for their production. That the statement emanates from the Commissioner of Labor is an assumption without any authority. From what sources the comparison with workingmen of other countries is secured is not known, but the concluding statement in the quoted article is undoubtedly as fallacious as the one which gives to the employer 82.2 per cent. of the value of the product. C. D. W.

The error which Colonel Wright here seeks to correct is one into which Mulhall seems to have been betrayed. In his *History of Prices*, written in 1885, he says, "British operatives as a rule earn in wages from 30 to 33 per cent. of the value of the manufactures which they produce, but in the United States the workingman gets only 18 per cent." The error seems to consist in stating the sum of the products as the value of the products. This error is committed by Mr. Steuart in the article above quoted, and by Colonel Wright in his attempted explanation, in which he takes the gross product, or more properly the sum of the products, as the aggregate value of these products. As the value of every product consumed in producing other products was destroyed there could exist no value, aggregate or separate, save that of the finished product, which must include the value of the material consumed in its production.

The sum of the values of products at the census of 1880 was \$5,369,579,194, and the sum of the values of material consumed \$3,396,823,540, leaving \$1,972,755,644 as the total value produced in manufacturing industry in 1880.[1] Dividing this amount by the average number of employés we have \$721.90 as the value produced by an entire year's work. The average amount paid for an entire year's work was \$346.91.

It will be noticed that Colonel Wright claims to obtain the amount \$347 as the average earnings per operative by dividing the aggregate wages paid in 1880 by the total number of employés. The aggregate wages paid, as shown by the Census Report of 1880, was \$947,823,649, and "the average number of hands employed" 2,731,595. Dividing the former by the latter we have \$346.90, Colonel Wright's quotient. This, however, is the result of dividing by the average number and not by the whole number of hands employed. As will be seen by reference to the table from the reports of the eleventh census, which follows, the amount stated as the average wages in 1890 was also obtained by dividing the total wages by the average number of employés. Colonel Wright should understand that the total wages paid is the earnings of the whole number of employés, and that their average earnings cannot be ascertained by dividing by the average number of employés. In factories, where employment is constant, the difference may not be great, but in the building trades, where but a small proportion of the employés have work for the whole year, the difference is very material. By dividing by the average number the effect is to obtain as the average earnings what would be earned if every employé had constant employment.

In the building trades, in the busy season of the year, all have employment at the highest wages, but in the slack time but few have employment, and usually at a reduced rate of wages. In some of these trades employés have on the average employment little if any more than half the year. Because of this fact their wages are higher than wages in factories where employment is constant. The effect of including these trades more largely in the census of 1890 than previously, and dividing by the average number of employés instead of the whole number, cannot but largely increase the apparent average annual earnings at this census. To illustrate: an establishment in one of the building trades may employ 100 men 100 days at $3 per day; 60 of these men another 100 days at $2.50 per day, and 10 of them another 100 days at $2 per day. This would make the total wages for the 300 days $47,000 and the average number of employés 56⅔. Dividing the total wages by the average number employed we have apparent average annual earnings of $829. As, however, there are 100 employés, the correct average annual earnings would be $470, which would make a very appreciable difference to the wage-earner if not to the statistician.[1]

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[1] The census furnishes no data from which may be ascertained the value of manufactured products, which, besides the value added in manufacturing, would include the value of products of the mine, field, forest, and fisheries, consumed in manufacturing industry.

Mr. Steuart falls into the same error in his tabulation and remarks accompanying the tables of the manufacturing reports of the eleventh census. Presenting the annexed table Mr. Steuart remarks:

> "The average annual earnings of employés as obtained from the total for 1880 was $346.91, while the average obtained for all employés for 1890 was $484.49, and for the employés exclusive of officers, firm members, and clerks, $444.83. Owing to the difference in the form and scope of the inquiry of 1890, as compared with that of 1880, previously referred to, neither of these average annual earnings for 1890 should be accepted as the exact increase during the decade. While the number of employés reported for 1890 is, as nearly as possible, the true average number employed during the year, the result obtained by using this number as a divisor into the total wages must not be accepted as the actual annual wages per employé for any particular class or occupation. The total number of employés and the total wages include not only officers, firm members, and clerks, and their salaries, but the number and wages of females, apprentices, children, and adults, employés working

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[1] The writer has not undertaken in this illustration to show the fact as to the average employment in the building trades, but as one engaged in one of these trades he is confident from his own observation that the illustration is not far from the truth.

the entire year and those engaged for only short periods, also piece workers. The average annual earnings is also affected by the difference in the proportion of these different classes of employés, as well as by the condition prevailing in the different industries and in the different localities, some industries requiring a larger proportion of skilled and high-paid employés than others. With these cautions in accepting the figures, the following statement is presented which shows for the United States the average annual earnings for all employés for each class, and for the males, females, and children in each class."

AVERAGE ANNUAL EARNINGS BY CLASSES.

Classes	Aggregate			Males above 16		
	Number	Wages	Average Annual Wages	Average Number	Wages	Average Annual Wages
Total	4,712,612	$2,283,216,529	$484	3,745,123	$2,031,403,924	$542
Officers, firm members, and clerks	461,009	391,988,208	850	418,081	372,169,441	90
Operatives, skilled and unskilled	3,492,029	1,590,516,997	455	2,831,795	1,436,482,387	498
Piece workers	759,584	300,711,324	396	445,247	222,752,096	500

Classes	Females above 15 Years			Children		
	Average Number	Wages	Average Annual Earn'gs	Average Number	Wages	Average Annual Earn'gs
Total	846,614	$235,186,742	$278	120,885	$16,625,802	$138
Officers, firm members, and clerks	42,928	19,818,767	462	. . . .	. . . .	. .
Operatives, skilled and unskilled	595,712	139,329,719	276	104,522	14,704,891	141
Piece workers	297,974	76,038,257	255	16,363	1,920,971	117

From the remark that the average obtained was for employés working for short periods as well as for the whole year, it might be inferred that the average annual earnings shown are less than would be the earnings for one employé the whole year, which would be the fact if the aggregate earnings were, as Colonel

Wright states in his editorial note, divided by the total number of employés. Dividing by the average number instead, the result is to give that which would be the average earning if every employé had constant employment.

On page 4, part 1 of the manufacturing statistics of the Eleventh Census we find a table of comparative statistics with the footnote referring to employés and wages for 1890: "Includes 461,009 officers, firm members, and clerks, and their wages amounting to $381,988,208. These classes of employés were not reported separately at prior censuses."

A similar footnote accompanied the census bulletins of manufactures. This footnote seems calculated to conceal rather than to reveal the truth, for it can convey no other impression than that though these classes were not reported separately at prior censuses, they were included in the aggregate. That they were not so included at the eighth and ninth censuses is distinctly stated by General Walker in his remarks in the ninth census.

> We find it remarked in the Eleventh Census: "The number of this class of wage-earners included in the reports of previous censuses, with the exception of two or three special inquiries at the census of 1880, were only those reported when the manufacturer considered that they should be included in answer to the general question as to the number of employés and the total amount of wages."

The schedules of no census prior to 1890 called for the enumeration of firm members and the estimated value of their services. Neither were there inquiries as to clerks and their salaries save the special inquiries in the census of 1880 referred to in the remarks quoted. In one of these industries, cotton goods, we find the employés reported under the heading, "operatives and officers," and the footnote, "From this number deduct 2115 officers and clerks, whose salaries are not computed in wages." Whether or not, in the other special industries reporting officers and clerks, the salaries are included in the wage account does not appear, nor has the writer been able to ascertain whether the number of officers and clerks reported in the cotton goods and other special inquiries are included in the total average number of hands reported for all industries. That they are so included may perhaps be inferred from the following remark at the eleventh census : "The questions used in 1880 tended to obtain a number of employés that would be in excess of the true average, while it is believed the questions in 1890 have obtained as nearly as possible the average number." That the value of their services of this class was not included in the wage account, may also be inferred from the remark. "The questions for 1890 also tended to obtain a larger amount of wages as compared with 1880." As firm members and the value of their services were called for by the schedules of no other census than the eleventh, and as officers and clerks were called for only in two or three special inquiries, footnotes which lead investigators to suppose that these classes and the value of their services were fully included, though not separately, at prior censuses, can be properly characterized only as perversions of the truth.

It is true that in the volumes on manufactures recently given to the public may be found remarks showing that the statistics of the eleventh census are not strictly comparable with those of previous censuses, but they fail to indicate the extent of the incomparability. Whatever would have been their value if published at an earlier date, they count for little so long after the misleading tables have been given to the public in census bulletins and in the Statistical Abstract. The Statistical Abstract, published by the Bureau of Statistics, gives the statistics of manufactures without any accompanying remark showing their incomparability with the statistics of other censuses, just as it also gives census statistics of true value without a remark or footnote indicating the incomparability of the earlier and later estimates. As a result, and of the misleading comparisons by census officials which the writer here criticises, the public is not enlightened but deceived. The following table from the campaign text-book of the National Democratic party, undoubtedly published without purpose to deceive, shows the conclusion usually arrived at from our manufacturing statistics.

They (wage-earners) have learned that since the year 1860 wages have steadily increased; this is proved by the following table of figures compiled from the census reports and official statistics:

AVERAGE YEARLY WAGES IN THE U. S. IN MANUFACTURING INDUSTRIES AS SHOWN BY CENSUS REPORTS.

Year	Population	Employés	Total Wages	Equivalent total wages in gold	Average annual wages in gold	Wages increased since previous census
1860	31,443,321	1,311,246	$378,878,966	$378,878,966	$288	
1870	38,558,371	2,053,996	775,584,343	674,421,168	328	14 per cent.
1880	50,155,733	2,732,595	947,953,795	947,953,795	347	5.5 "
1890	62,831,900	4,712,622	2,283,216,529	2,283,216,529	484	39 "

In his debate with Mr. Harvey, Mr. Horr quoted similar statistics with the result of weakening with wage-earners the cause he advocated. While such statistics may deceive others and lead them to wonder at the discontent of wage-earners, they do not deceive that class, but excite their animosity against those who they believe juggle figures for the purpose of deceiving the public as to their wages.

While Colonel Wright calls attention to an error conveying the impression that wage-earners receive an almost insignificant proportion of the value which their labor produces, he strangely neglects to correct the more common erroneous impression of an enormous increase in wages.

H. L. BLISS.

CHICAGO.